

Under the Background of "Internet +", Mixed Teaching Mode of Science in the Reform of Rural Medical Majors

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Abstract: With the construction of the network online course platform under the background of "Internet +", the mixed teaching^[1] based on the background of "Internet +" came into being, and has been widely used in the daily teaching of full-time students, and proved its existence advantages. Rural medical majors have limited education degree, age gap, fixed time and other factors, so that students' teaching methods and full-time undergraduate students cannot be rigid. As one of the most important clinical medical courses for rural doctors, science not only requires students to master theoretical knowledge, but also requires proficiency in basic clinical operation skills. Therefore, for this kind of students, we by building "Internet +" science online open course platform, to provide high quality science teaching resources, at the same time using online learning + offline flip classroom mixed teaching model, the "tailored" for rural medical students, build in line with their learning ability level and receive knowledge ability of new teaching mode^[2].

Keywords: The Teaching Model Reform; Mixed teaching mode; Rural Medicine

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1. Objects and Methods

1.1 Study Subjects

The 2017 rural medical students were 192. The students are high school graduates, and the random classes are classes 1-6. The first ten chapters of the teaching content adopt the mixed teaching, and the latter five chapters adopt the traditional teaching mode. The teacher are the same group of teachers.

2. Application of science hybrid teaching mode under the background of "Internet +"

2.1 Build an open online science course platform based on "Internet +"

With the online teaching platform as the medium, the online teaching resources of online science have been established, and integrated and supplemented the original online courses. Through all teachers of the general teaching and research office discussing collective lesson preparation and online platform construction for many times, a relatively complete network resources course has been established. Through the mode of recording the micro-class and small video, the teacher decomposes and teaches the knowledge points in the book, which is convenient for students to repeatedly understand and remember. After the teacher uploads the small video of the course to the online teaching platform, they can inform the student to preview the content before class. Students can watch it through electronic devices (computers, mobile phones, tablets, etc., anytime and anywhere) without time restrictions. And can according to their own ability to master this part of the knowledge, targeted repeated view, which highlights the student-centered educational concept and ideological^[3].

2.2 Establishment of online learning + offline flipped classroom hybrid teaching mode

Surgery courses are highly professional and require students to have good and basic professional knowledge, which is nothing more than a difficult challenge for rural medical students. Starting from the students' own knowledge level and information processing ability, the members of the research group give full play to the advantages of "online and offline", center on the process of students acquiring knowledge and students' knowledge ability, build a mixed teaching mode and apply it to the teaching process of science.

(1) Prepare before class

One week before class, students were sent to the QQ group, requiring students to watch the class content by logging on to the superstar platform, and understand their grasp of the content through the after-class exercise test, and collect the difficult problems encountered in learning, so as to answer them in offline teaching.

Implementation of the flipped classroom

(2) During the offline teaching period, teachers divide each administrative class student into a learning group of 10 people. A representative is recommended to collect the doubts and difficulties encountered by the group members in learning through the superstar platform, and explain them in class. Then, take the group as a group to discuss the proposed doubts and difficulties, and finally

sent a representative to tell the results of the group discussion and analysis. After each group of representatives speaks, other group members may make different opinions and explain their reasons. Finally, the teacher leads the students to comb out the theoretical knowledge in the way of problem method and summarize. According to the speech of the spot score of each group, and the score will be included in the students' ordinary results.

(3) Summary after class

After class, students can continue to consolidate the important and difficult knowledge through the superstar platform to strengthen their memory. At the same time, students are encouraged to reflect on their knowledge acquisition ability after class, and summarize their learning methods and homework completion.

2.3 Teaching evaluation

In order to objectively evaluate the mixed teaching and the traditional teaching, we used the theoretical examination and questionnaire survey to evaluate the teaching results.

(1) Theoretical examination. After the mixed teaching content and the traditional teaching content, the examination questions are formulated according to the requirements of the syllabus, and the effect of students' learning is examined in the form of closed volume. The examination type is proposition in accordance with the requirements of the unified examination of rural medical students in Hunan Province. The examination questions are all 100 individual choice questions (each question is 1 point), mainly testing the students' grasp of the disease and clinical thinking ability.

(2) Questionnaire survey. After the whole course, at the same time to anonymous questionnaire survey, according to the early project design of teaching quality evaluation index system, the classroom teaching evaluation from knowledge understanding, mastery, learning efficiency, communication ability, teamwork ability, analysis and problem solving ability, clinical thinking ability and multi-dimensional, many aspects to evaluate, to compare students' satisfaction with the two teaching mode. The questionnaire set three levels of great satisfaction, general satisfaction and dissatisfaction, and the overall satisfaction was calculated as total satisfaction = (very satisfaction + general satisfaction) * cases / total number x 100%. In total, 192 questionnaires were issued, and 192 valid questionnaires were recovered, with an efficiency of 100%.

2.4 Statistical Methods

Statistical analysis with statistical software SPSS19.0, use rate of count data (%), measurement data is expressed by mean \pm standard deviation, the former is compared with χ^2 test, the latter is compared with t test, and the different statistically significant standard is $P < 0.05$.

3. Analysis and evaluation of the teaching effect

3.1 Comparison of theoretical test scores

Scoscores were obtained after comparing the phased tests after two different teaching patterns ($91.472.03 \pm \text{false}$) All are higher than the traditional teaching model ($82.261.49 \pm \text{false}$), Differences were statistically significant ($P < 0.05$).

3.2 Students' satisfaction evaluation of the teaching effect

Through survey collection and data summary statistics, mixed teaching satisfied 97.4% and 79.17%, with statistically significant differences ($P < 0.05$).

3.3 Comparison of teaching effect evaluation

Comparing the teaching effects of students on knowledge mastery, understanding ability, learning efficiency, communication ability, teamwork ability, clinical thinking ability, analysis and problem solving ability under the two teaching modes, we found that the mixed teaching evaluation effect was significantly higher than the traditional teaching ($P < 0.05$).

4. Discussion

4.1 The Necessity of Implementing the Teaching Model Reform

In order to solve the problem of insufficient health technical personnel in rural areas, the Ministry of Education has added the ^[4] of rural medical practitioners for villages and remote and poor areas in rural health centers in the Professional Catalogue of Secondary Vocational Schools (revised in 2010). Since Hunan Province launched the "Rural Doctor Local Talent Training" project in 2013, rural doctor education has achieved the rapid development of ^[5] in Hunan Province. At present, the training mode of rural doctor education in China mostly adopts the traditional teaching mode, which cannot reflect the characteristics of rural doctors. Although the localized talent training program of rural doctors plays a great role in China's medical and health education system. However, due to the inherent characteristics of trainees receiving rural doctors themselves, they urgently need the medical theoretical knowledge and operational skills of ^[6] to guide clinical application.

General theory of science is a basic course in neuroscience, mainly including humoral imbalance, shock, nutritional support, surgical infection, etc. It is important ^[7] to learn this course well for the learning of various systematic diseases in the later stage. Moreover, the general theory of science is a professional course and compulsory course of rural medicine, which has strong professionalism. Obviously, the traditional teacher-led "cramming" teaching method has been difficult to achieve a good teaching effect. Therefore, it has become a problem to be solved in modern medical education to change the traditional teaching mode and return the autonomy of learning from passive receiving to active learning; and from being limited to the classroom to learn anytime and anywhere.

4.2 Effect Evaluation and Thinking on Mixed Teaching Mode under the background of "Internet +"

This study found that the use of superstar platform as the media of online learning joint offline flipped classroom mixed teaching mode of students, theoretical test scores are higher than the traditional teaching mode, which fully shows that this hybrid teaching mode can better help students master and understand classroom knowledge, and effectively improve academic performance.

We found that the student satisfaction of our mixed teaching model was significantly higher than the traditional teaching model. Students believe that this hybrid teaching mode of online learning + and offline flipped classroom is conducive to stimulate students' interest in active learning, improve students' learning efficiency, cultivate students' certain clinical thinking ability, and more importantly, cultivate students' ability to analyze and solve problems. At the same time, through the offline teaching mode of flipped classroom, we enhance the communication and communication between students, students and teachers, improve students' communication ability, and cultivate students' team spirit. The vast majority of students expressed their hope to adopt more flipped classroom teaching mode in the future, so that students from passive learning to active learning, from passive receiving knowledge to active thinking ability. Using the traditional teaching mode, students believe that the mastery and understanding of knowledge is obviously weaker than the mixed teaching ability, and they are prone to memory confusion.

4.3 Some problems in the mixed teaching mode of science under the background of "Internet +"

Because rural medical professional students have received traditional teaching for a long time and lack good independent learning ability, they are a little uncomfortable to this mixed teaching mode. Most students with good foundation and strong learning autonomy can quickly integrate into the flipped classroom learning through active preclass learning; However, for some students with poor foundation and learning initiative, they fish in troubled water, which not only cannot learn knowledge, but also may have an atmosphere that affects other students to discuss problems.

5. Conclusion

To sum up, rural doctors professional using "Internet +" under the background of foreign science theory mixed teaching mode follows the students as the main body, teachers as the leading teaching mode, hope to help students quickly grasp difficult knowledge, summarized knowledge, also hope students to participate in learning, so as to avoid students in the process of learning doubts cannot consult teachers and feedback. This research is based on the general teaching and research office through the superstar elegant online platform building foreign science online open course platform, the platform of foreign science teaching resource base and the application of flipped classroom, so as to stimulate students' interest in learning, guide students active learning, finally achieve the purpose of improving the teaching quality of rural medical students. This hybrid teaching model is worth continuing promotion in science follow-up content teaching.

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Correction statement:

Author Liu Jiamin's English name: Jiamin Liu Title of the article: "Data mining of NBA", published in "Learning & Education" magazine, Issue 1, 2021, in the text 2.3.1, 2.3.2, 2.3.3, the word "false" is not a word in the original text due to a typographical error. Hereby certify!